

QUAESTIONES ENTOMOLOGICAE

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Book Review

CHAPMAN, R. F. 1969. *The Insects — Structure and Function*. American Elsevier Publishing Company, Inc., New York. Library of Congress Catalog No. 71-75216. xii + 819 pp., 509 text fig., c. 1000 refs., \$15.00.

This book is a welcome addition to the literature on insect structure and function. Chapman has considered these two topics under six major sections: the head, ingestion and utilization of food; the thorax and movement; the abdomen, reproduction and development; the cuticle, respiration and excretion; the nervous and sensory systems; and the blood, hormones and pheromones. Each section is further subdivided. For example Section E, "The Nervous and Sensory Systems" has the following chapters; the nervous system, the eyes and vision, sound production, mechanoreception, chemoreception, and temperature and humidity. Further subdivision occurs within each chapter, each beginning with a general discussion in which significant literature and review articles are cited.

A book of this type, with such a wide scope, will no doubt be disappointing to some specialists but it is aimed at the post-graduate not the specialist. The layout and arrangement of the material in this book makes it an excellent reference text. However, the documentation in parts of the text is not adequate and this leaves the origin of some statements in doubt.

There are also some surprising deficiencies in places. For instance in the generally adequate chapter on the head and its appendages, the sucking mouthparts are dispensed with in two paragraphs and one figure, with only scant mention being made of the Hemiptera and Diptera. Again, the chapter on reproduction is generally very good but is weak on spermatogenesis and oogenesis.

Chapman's style of writing is telegraphic and he inserts specialized terms in the text with little or no explanation. This results, at times, in the text being difficult to follow. However, in a reference book of this type such a style is acceptable. The line diagrams, taken from many different sources, are clear and very well labelled. However, the scraperboard technique used in some instances, particularly for cellular detail, does not do justice to the original figures.

Despite these criticisms this book is, in overlapping areas, as good as Wigglesworth's "The Principles of Insect Physiology". Many of the comparable chapters by Chapman are more extensive and up-to-date than those by Wigglesworth, for instance those on the integument and mechanoreception. For these reasons Chapman's text will, for some uses, supplant that of Wigglesworth.

This well-produced book should be on the shelf of everyone who teaches entomology or who considers himself a serious entomologist. Chapman's book is not only a particularly good, up-to-date reference book but is relatively good value.

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